

CLAIMS

1. A system for in vivo detection of H. pylori, the system comprising
an autonomous in vivo sensing device configured for sensing in vivo pH
and for transmitting in vivo data to a receiving unit; and
an external receiving unit configured for indicating an in vivo pH about
equal or larger than 5.5.
2. The system according to claim 1 wherein the sensing device is capable of
covering most of a stomach body.
3. The system according to claim 1 wherein the sensing device includes an image
sensor.
4. The system according to claim 1 wherein the sensing device includes an
illumination source.
5. The system according to claim 1 wherein the sensing device includes pH
indicator.
6. The system according to claim 5 wherein the pH indicator is a color changing
indicator.
7. The system according to claim 6 wherein the pH indicator is configured to
change color at a pH of about equal or larger than 5.5.
8. The system according to claim 6 wherein the pH indicator is attached to an
optical window in the sensing device.

9. The system according to claim 6 wherein the pH indicator is immobilized within a sampling chamber in the sensing device.
10. The system according to claim 1 wherein the sensing device comprises at least one sampling chamber.
- 5 11. The system according to claim 1 wherein the sensing device comprises a radio frequency transmitter.
12. The system according to claim 1 wherein the sensing device comprises a power source.
13. The system according to claim 1 wherein the receiving unit is configured for
10 receiving data transmitted from a stomach.
14. The system according to claim 1 wherein the receiving unit is configured for receiving radio frequency signals.
15. The system according to claim 1 wherein the receiving unit comprises a display configured for displaying transmitted in vivo data.
- 15 16. The system according to claim 15 wherein the display is configured for indicating an in vivo pH about equal or larger than 5.5.
17. A system for in vivo detection of *H. pylori*, the system comprising
an autonomous in vivo pH sensing device, said device comprising a
transmitter;
20 an external receiving unit; and
a processor configured for identifying changes in pH over a
predetermined threshold.

18. The system according to claim 17 wherein the predetermined threshold includes a pH change of about 2.5.
19. The system according to claim 17 further comprising a display.
20. The system according to claim 19 wherein the display is configured for
5 indicating a change of pH over a predetermined threshold.
21. The system according to claim 17 wherein the pH sensing device comprises an imaging system.
22. A method for in vivo detection of *H. pylori*, the method comprising
sensing pH in at least one location proximate to a patient's stomach
10 mucus; and
transmitting by radio frequency pH data to an external receiving unit.
23. The method according to claim 22 further comprising indicating a pH value which is about equal to or exceeds a predetermined threshold.
24. The method according to claim 22 wherein sensing pH is by imaging a color
15 changing pH indicator.
25. The method according to claim 23 wherein the predetermined threshold is about 5.5.
26. The method according to claim 23 wherein indicating a pH value comprises displaying an indication.
- 20 27. A method for in vivo detection of *H. pylori*, the method comprising
inserting an autonomous pH sensing device into a patient's stomach;

positioning the patient to achieve substantially covering of the patient's
stomach body; and
receiving in vivo data.

28. The method according to claim 27 wherein the pH sensing device comprises an
5 imaging system.
29. The method according to claim 27 comprising receiving in vivo images of a
patient's stomach.